

APPLICANT(S): KRITCHMAN, Eliahu M. et al.  
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### **REMARKS**

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Applicant asserts that the present invention is new, non-obvious and useful. Favorable reconsideration and allowance of the claims is respectfully requested.

### **Status of Claims**

Claims 197-201 and 203-219 are pending in the application, of which claims 209-219 are withdrawn from consideration.

Claims 197-208 have been rejected.

Claim 202 has been cancelled, without disclaimer of prejudice. In making this cancellation without prejudice, Applicants reserve all rights in these claims to file divisional and/or continuation patent applications.

Claims 197 and 201 have been amended. Applicants respectfully assert that the amendments to the claims add no new matter.

### **Remarks to Restriction Requirement**

In response to the requirement for restriction, Applicants affirm the provisional election to prosecute the invention of group I, namely claims 197-208. Applicants note that the claims directed to the non-elected Group, namely claims 209-219 were withdrawn from further consideration by the Examiner. Applicants reserve all rights to file a divisional application for the non-elected claims.

### **CLAIM REJECTIONS**

#### **35 U.S.C. § 112 Rejections**

In the Office Action, the Examiner rejected claims 197-208 under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 197 and 201 have been amended, and the term "substantially" has been removed from these claims. Applicants respectfully assert that these amendments render claims 197-208 proper under 35 USC §112 and request that the rejection be withdrawn.

### 35 U.S.C. § 102 Rejections

In the Office Action, the Examiner rejected claims 197-204 under 35 U.S.C. § 102(b), as being anticipated by Jang et al. (hereinafter "Jang") (US 6,165,406).

Applicants respectfully assert that Jang does not teach all the features of amended independent claim 197 and therefore cannot anticipate the claim and the claims dependent thereon.

Amended claim 197 includes, *inter alia*, "controlling the temperature of upper layers of said object being printed to maintain above the glass transition temperature of said material".

Jang discloses a three-dimensional printing process where "the material must be maintained at a temperature slightly above its glass transition temperature just before being discharged" (see col. 15, lines 46-48).

Jang further discloses that "the previous layers must be maintained at a temperature lower than the glass transition temperature (column 15, lines 44-50). Jang also notes that before a new layer is dispensed, "the previous layer facing the nozzle must have been solidified before the new material is brought in contact with this portion of the previous layer " (column 15, lines 50-53).

The Office action maintains (page 6, last paragraph of the Office Action) that since the material being dispensed is above the glass transition temperature, it would be inherent that the upper layers of the three-dimensional object would have a temperature above the glass transition temperature until these layers were cooled.

Applicants strongly disagree. Applicants assert that Jang specifically emphasize that each top layer must be solidified, namely, cooled to a temperature below the glass transition temperature before the new material is brought in contact with that layer. Accordingly, Jang teaches away from having more than one upper layer maintained and controlled to be in a temperature above the glass transition temperature. Further, Jang does not disclose any controlling of the temperature of the upper layers. As indicated by the Examiner, Jang discloses a process in which the upper layer would inherently have a temperature above the glass transition temperature when being dispensed. The layer is then being naturally cooled to the ambient temperature.

Accordingly, Jang does not teach, at least, "controlling the temperature of more than one upper layer of said object being printed to maintain the temperature above the glass transition temperature of said material", as claimed by claim 197.

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Accordingly, Applicants respectfully assert that amended independent claim 197 is allowable. Claims 198-201 and 203-208 depend from, directly or indirectly, claim 197, and therefore include all the limitations of this claim. Therefore, Applicants respectfully assert that claims 198-201 and 203-208 are likewise allowable. Claim 202 has been cancelled without prejudice and therefore the rejection to the claim is moot.

Accordingly, Applicants respectfully request that the Examiner withdraw the rejections of claims 197 -204.

### **35 U.S.C. § 103 Rejections**

In the Office Action, the Examiner rejected claims 205-206 under 35 U.S.C. § 103(a), as being unpatentable over Jang as applied to claim 204 above and further in view of Leyden et al. (US 6,193,923).

In the Office Action, the Examiner rejected claims 207-208 under 35 U.S.C. § 103(a), as being unpatentable over Jang as applied to claim 197 above and further in view of Leyden et al. (US 6,193,923).

Applicant respectfully traverses the rejection of claims 205-208 under 35 U.S.C. § 103(a), in view of the remarks that follow.

Each of dependent claims 206-208 depends, directly or indirectly, from independent claim 197. As discussed above with respect to the 35 U.S.C. §102(b) rejection, amended independent claim 197 is patentable over Jang.

Leyden et al. cannot cure the deficiencies of Jang as it does not teach or suggest, at least, "controlling the temperature of upper layers of said object being printed to maintain above the glass transition temperature of said material", as claimed by amended claim 197. Accordingly, claim 197 is patentable over the combination of Jang and Leyden et al.

Each of dependent claims 205-208 include all the features of claim 197 as well as additional distinguishing features, and are therefore allowable. Accordingly, Applicants respectfully request that the rejections under 35 U.S.C. §103(a) of dependent claims 205-208 be withdrawn.

### **CONCLUSION**

In view of the foregoing amendments and remarks, the pending claims are allowable. Their favorable reconsideration and allowance is respectfully requested.

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Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

No fees are believed to be due associated with this paper. However, if any additional fees are due, please charge such fees to deposit account No. 50-3355.

Respectfully submitted,



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Dated: December 9, 2008

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